



2025

Coconut Marketplace Mobility Hub Plan

Shuttle Alternatives

Contents

- Introduction
- Final Methodology and Assumptions
- Alternatives
- Recommended Service Plan
- Capital Plan
- Financial Plan
- Discussion



Introduction



1

Purpose of Shuttle

To fully realize the goals of the Coconut Marketplace Mobility Hub, frequent shuttle service is proposed to run between the airport and the resort cluster around the marketplace to transport visitors, employees, and residents of the area.

A mobility hub is designed to provide transportation access and serve as a travel gateway to other parts of the region. Adding shuttle service would build out the hub's reach, reduce traffic congestion associated with visitors, and provide a fast, safe, and easy connection to the airport.



Initial Feedback and Support for Shuttles

Shuttles and other visitor-focused transportation experiences have been mentioned by project partners since the CMMH project kick-off (August 2023)

Car rentals in Kaua'i are the among the most expensive markets in country

As of 2022, LIH has the highest car rental prices across the Hawaiian Islands (\$607 per week)

<https://www.cheapcarrental.net/press/summer22.html>

Preferences from CMMH Meeting (December 2023)

What is the most important aspect of a SHUTTLE?



Final Methodology and Assumptions



2

Shuttle Input Assumptions

To understand demand for a shuttle system, this analysis evaluates the factors relevant to travelers and their potential mode shift from a rental car to a shuttle service.



1.4 Million

Kaua'i receives about 1.4 million visitors each year



2.4 people

The average size of a travel party is around two and a half people



7.7 days

The average length of stay on Kaua'i is just over a week



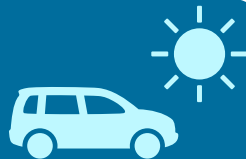
74%

According to a recent survey, 74% of visiting groups rented a car



429,200

Just under a half a million cars are rented on Kaua'i each year



1,175

That means there are about a thousand rental cars on the island each day



39.4%

2 out of 5 visitors stay in an area served by a "Southeastern Island Shuttle"



48%

of visitors never used a shuttle during their trip

83%

of visitors said they'd take a shuttle from the airport if they could rent a car closer to their lodging



CM Transportation Needs by User Group

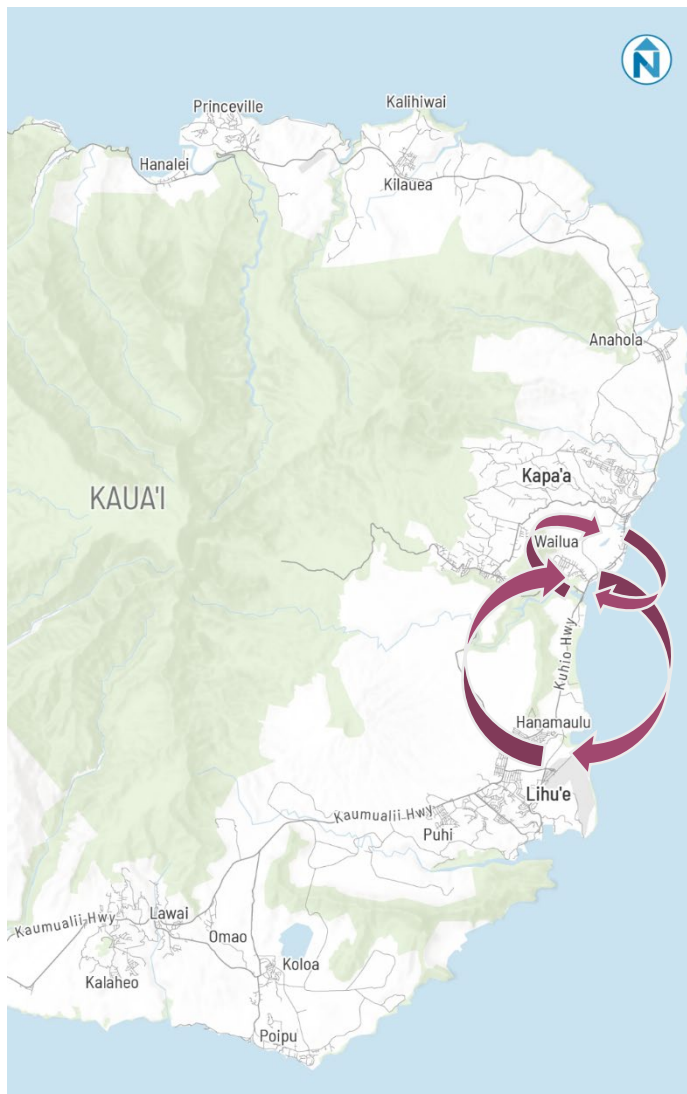
Type	General Descriptions	Transit Needs	Active Needs	Driving/Parking Needs
People who live near the site	<p>Lives in nearby communities, including Wailua, Waipoli, and southern Kapa'a</p> <p>May walk to Highway for quick store access and bus stop</p> <p>Would walk further if not for limitations in infrastructure</p>	<p>Frequency and service that is convenient for a variety of trip types, 7 days a week</p> <p>Complete sidewalk and path network to stops</p>	Functional sidewalks and paths, and comfortable crossings from nearby communities	Desire for reduced traffic congestion and use of bypasses recommended by mapping/directional apps
People who visit the site	<p>Able to access and afford lodging on the Hawaiian Islands, the most expensive average daily rate for lodging in the United States</p>	<p>If convenient, visitors would consider taking a shuttle from the airport to the hotel, and relying on short-term car rental when needed</p>	A clearly defined, marked, and continuous network of pathways along intuitive routes (e.g., the shoreline and Highway)	<p>A significant amount of visitors who want to rent a car look for the "flexibility of going to more locations during the day"</p> <p>Convenient alternatives to full trip rental car</p>
People who work in the area	<p>Residents of Kaua'i who work in hospitality and/or services near the CMMH area</p> <p>Live more than a short walking distance away from their workplace</p>	<p>A span of service which can cater to early, late, and weekend shifts</p>	Connections extending slightly beyond the existing network to more easily access nearby destinations, errands during lunchtime or breaks (e.g., Longs Drugs, Safeway)	Safe intersections for turning off/on the Highway

Initial Alternatives

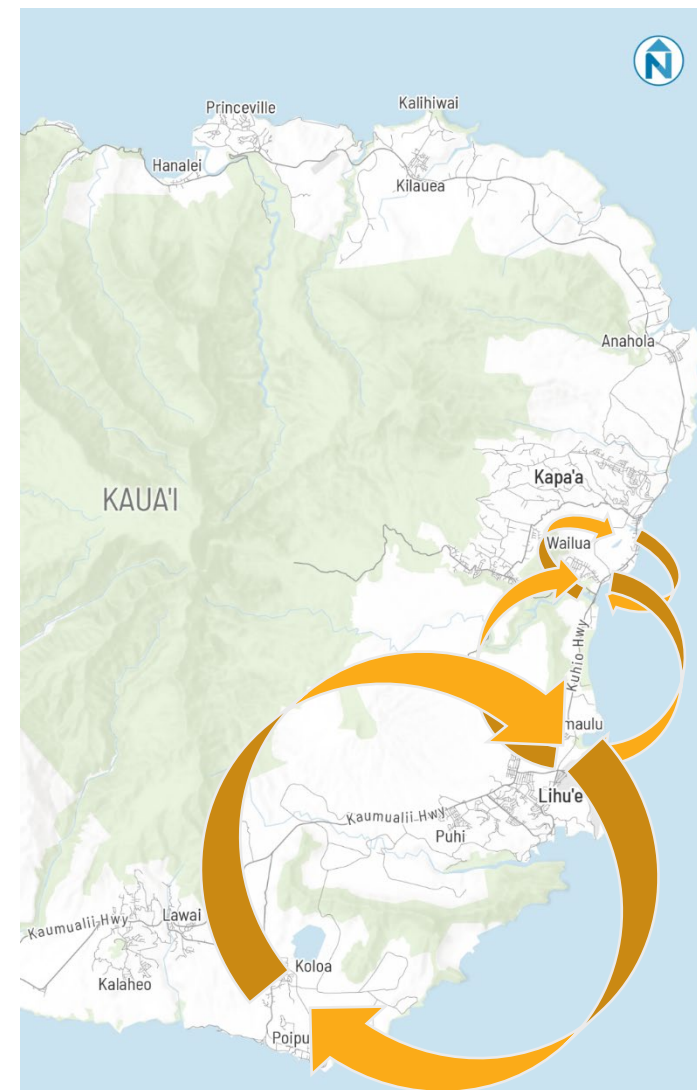
SHUTTLE OPTION 1: EXPRESS SHUTTLE



SHUTTLE OPTION 2: NORTHERN EXTENSION



SHUTTLE OPTION 3: NORTHERN AND SOUTHERN EXTENSION



Estimating Shuttle Travel Time

Shuttle travel time estimates consider the following factors:

- Frequency of service
- Passenger capacity per vehicle
- Route distance for three potential service options

Shuttle Route	Shuttle Travel Time (round trip plus layover during <u>peak</u> traffic times)
Express Shuttle (Option 1) LIH Airport ↔ Coconut Marketplace	66 minutes
Northern Extension Shuttle (Option 2) LIH Airport ↔ Coconut Marketplace ↔ Kapa'a	83 minutes
Southeastern Island Shuttle (Option 3) Po'ipū/Koloa ↔ LIH Airport ↔ Coconut Marketplace ↔ Kapa'a	118 minutes

These service assumptions provide the basis for cost of operations.



Estimating Shuttle Service

Initial estimates carried the following assumptions (for the purposes of simplicity and equal comparison of alternatives):

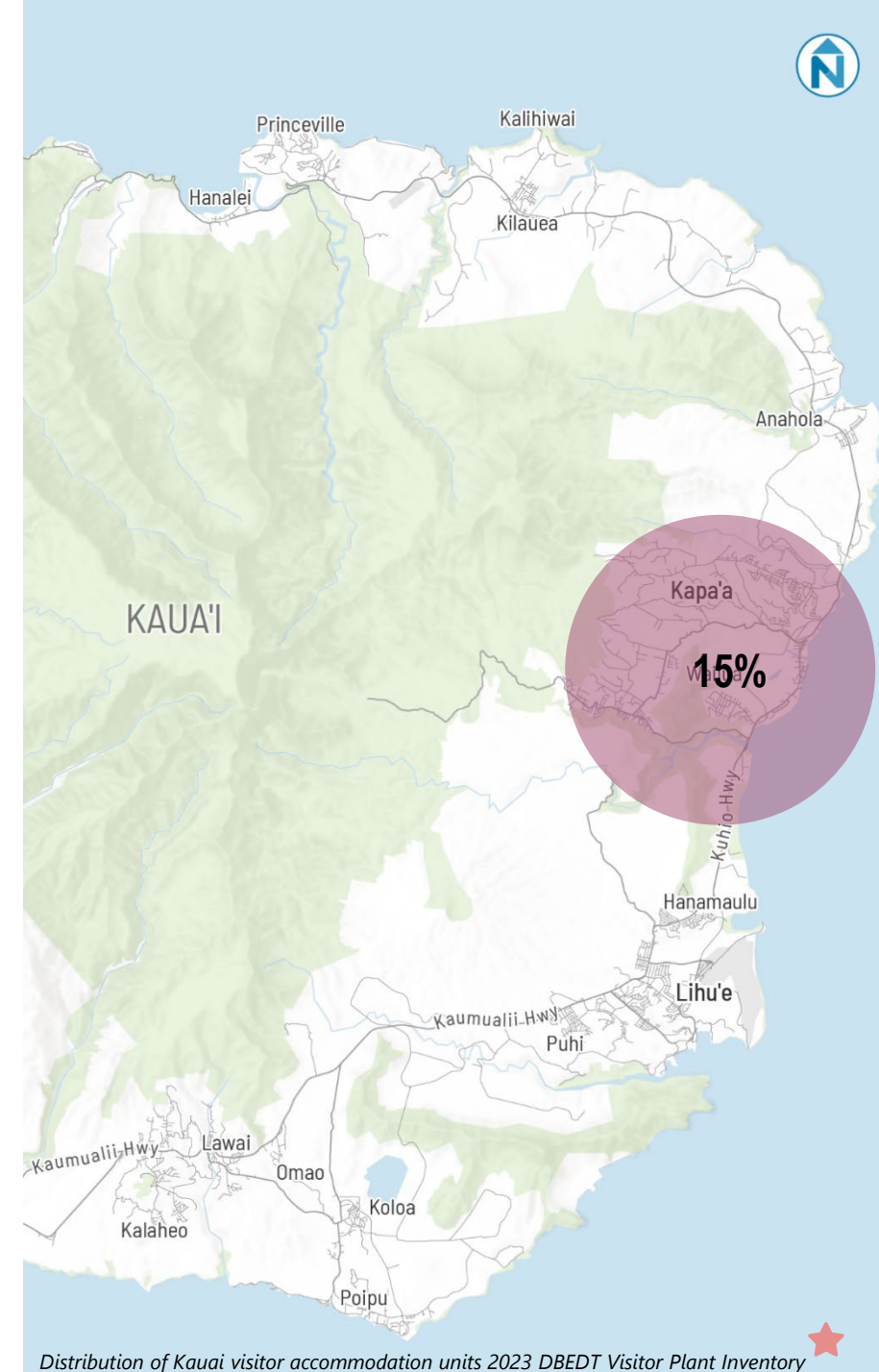
- Service available 7 days/week
- Service during “peak” traffic is 7 am to 12 pm and 5 pm to 10 pm
- Service during “regular” traffic is 12 pm to 5pm

Service estimates for each alternative are provided in **annual revenue hours** rounded to the nearest increment of 1,000.



Potential Customer Markets

- Total visitor accommodation units on island: 9,330
- Wailua/Kapa'a area visitor accommodation units : 1,400 visitor accommodation units
- Assuming visitors to the Coconut Marketplace area represent **15%** of total visitors to the island, a shuttle serving this location could **potentially serve the 210,000** of the 1.4 million annual visitors....
- ... Or approximately **575 visitor arrivals per day** to the Coconut Marketplace area, on average.



Alternatives

3

Initial Alternative Development and Refinement

To determine a preferred route for the future shuttle, the team evaluated three possible service scenarios and modeled capital and operational expenses needed to run each of the three scenarios. These “supply-side” factors were paired with “demand-side” variables based on data from Hawaii State Tourism Statistics and the recent Transportation Preference survey.

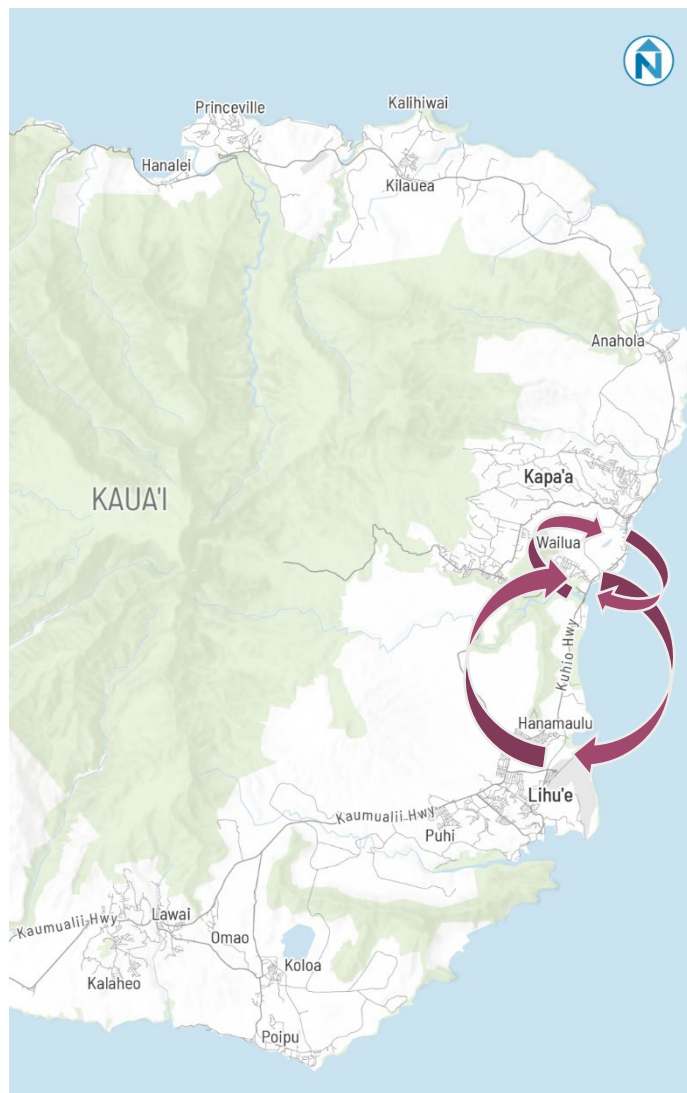
- The team developed **three** possible service alternatives based on travel to high-demand areas with resorts, restaurants, and beaches with service to LIH Airport
 - LIH Airport to Coconut Marketplace
 - LIH Airport to Coconut Marketplace to Kapa’a
 - Po’ipū/Koloa to LIH Airport to Coconut Marketplace to Kapa’a
- Ultimately, the LIH Airport to Coconut Marketplace alternative was selected and refined for further analysis as it provides key connections from the airport to the future Coconut Marketplace Mobility Hub, a high density of resorts. It may one day be part of a shuttle network with larger coverage, but in the short-term, the chosen alternative is a starting point.

Initial Alternatives

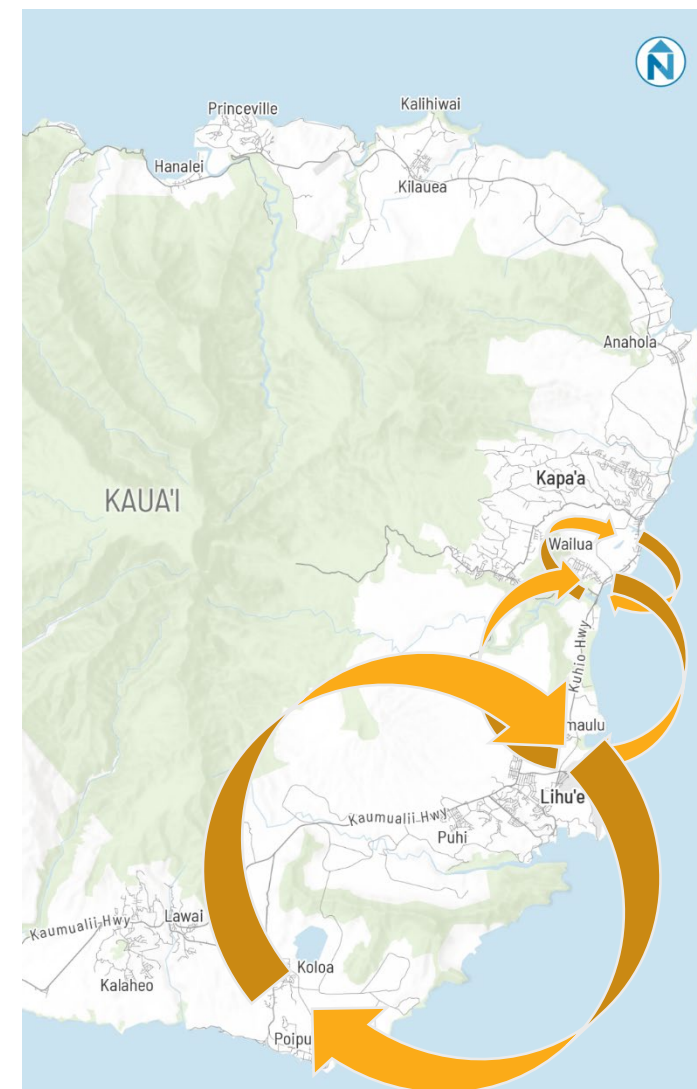
SHUTTLE OPTION 1: EXPRESS SHUTTLE



SHUTTLE OPTION 2: NORTHERN EXTENSION



SHUTTLE OPTION 3: NORTHERN AND SOUTHERN EXTENSION



Express Shuttle

LIH Airport ↔ Coconut Marketplace Shuttle



**15 min.
Frequency**

The shuttle will arrive at both the airport (LIH) and Coconut Marketplace every 15 minutes



**66 min. Round
Trip**

During peak traffic hours, the shuttle will take just over an hour to make a round trip



**6-Mile End to
End Distance**

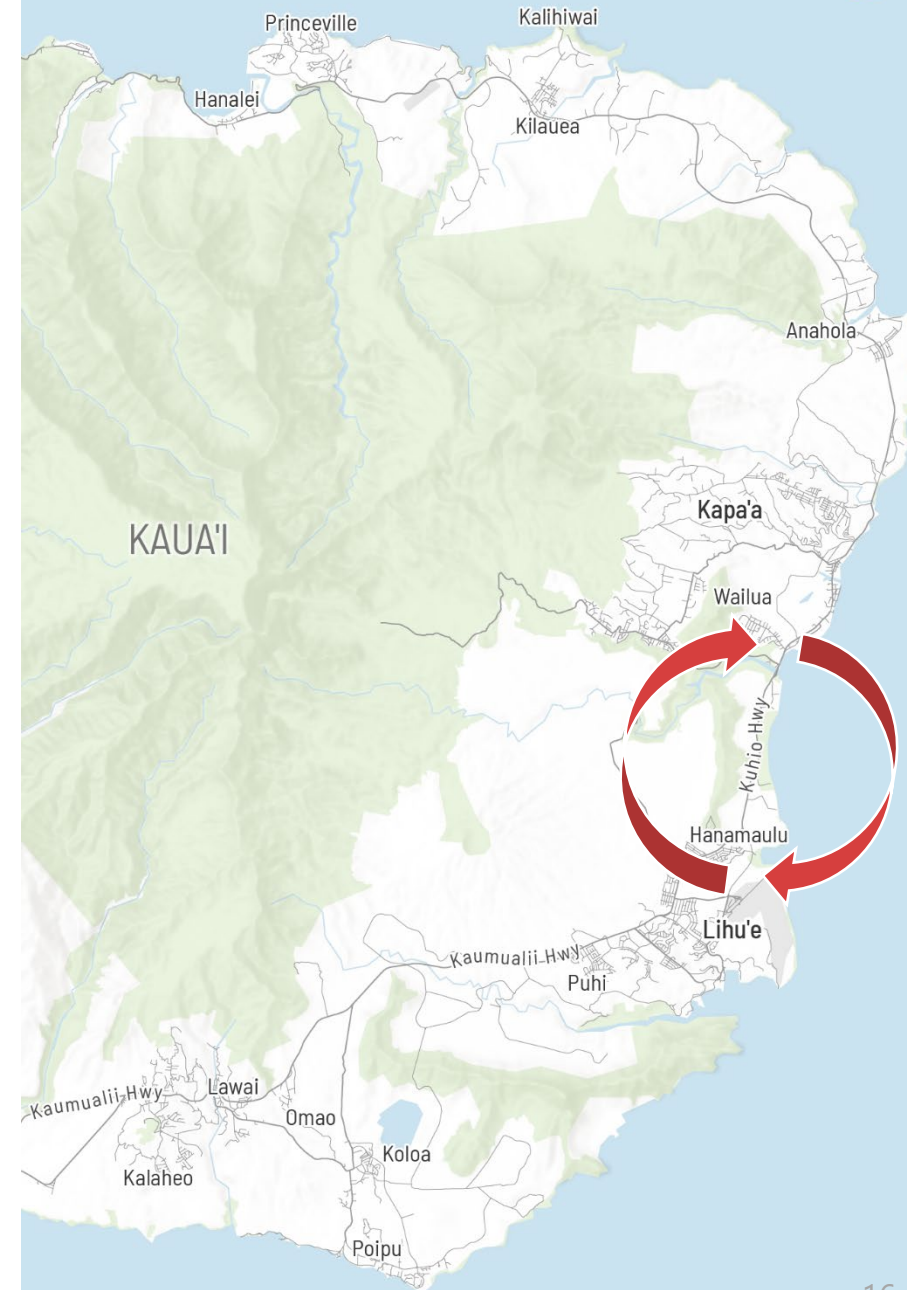
The one-way distance between the airport (LIH) and Coconut Marketplace is 6 miles.



Round Trip / Frequency = Total # of Vehicles (rounded up)

5 shuttles are required during peak hours to achieve 15-minute frequency

That'll result in approximately 24,000 annual revenue hours...



Northern Extension Shuttle

LIH Airport ↔ Coconut Marketplace ↔ Kapa'a Shuttle



**15 min.
Frequency**

The shuttle will arrive at the airport (LIH), Coconut Marketplace, and Kapa'a every 15 minutes



**83 min. Round
Trip**

During peak traffic hours, the shuttle will take almost an hour and a half to make a round trip



**8-Mile End to
End Distance**

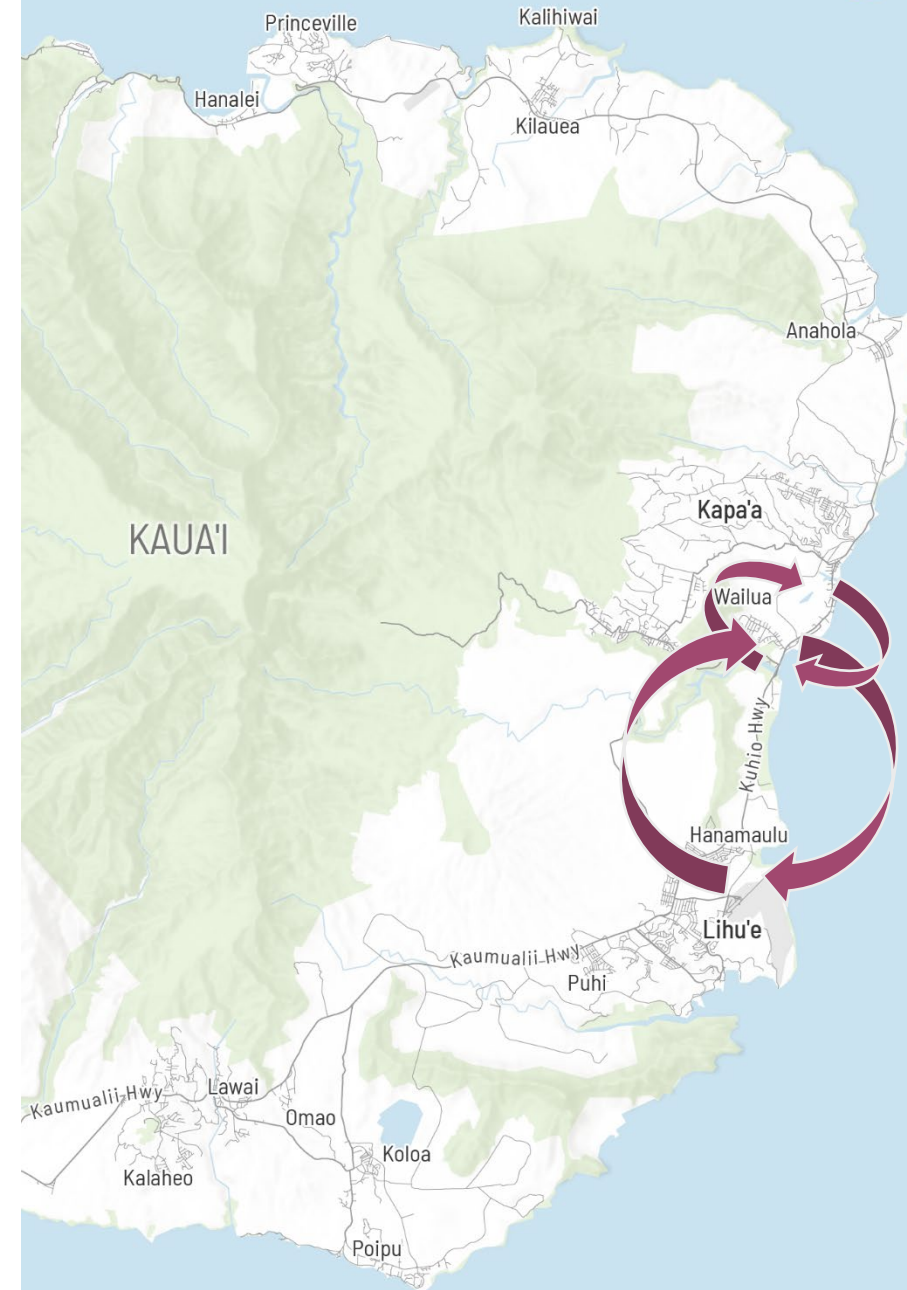
The one-way distance between the airport (LIH), Coconut Marketplace, and Kapa'a is 8 miles.



Round Trip / Frequency = Total # of Vehicles (rounded up)

6 shuttles are required during peak hours to achieve 15-minute frequency

That'll result in approximately 29,000 annual revenue hours...



Southeastern Island Shuttle

Po'ipū/Koloa ↔ LIH Airport ↔ Coconut Marketplace ↔ Kapa'a



**15 min.
Frequency**

The shuttle will arrive at Po'ipū/Koloa, the airport (LIH), Coconut Marketplace, and Kapa'a every 15 minutes



**116 min.
Round Trip**

During peak traffic hours, the shuttle will take almost two hours to make a round trip



20-Mile End to End Distance

The one-way distance between Po'ipū/Koloa, the airport (LIH), Coconut Marketplace, and Kapa'a is 20 miles.

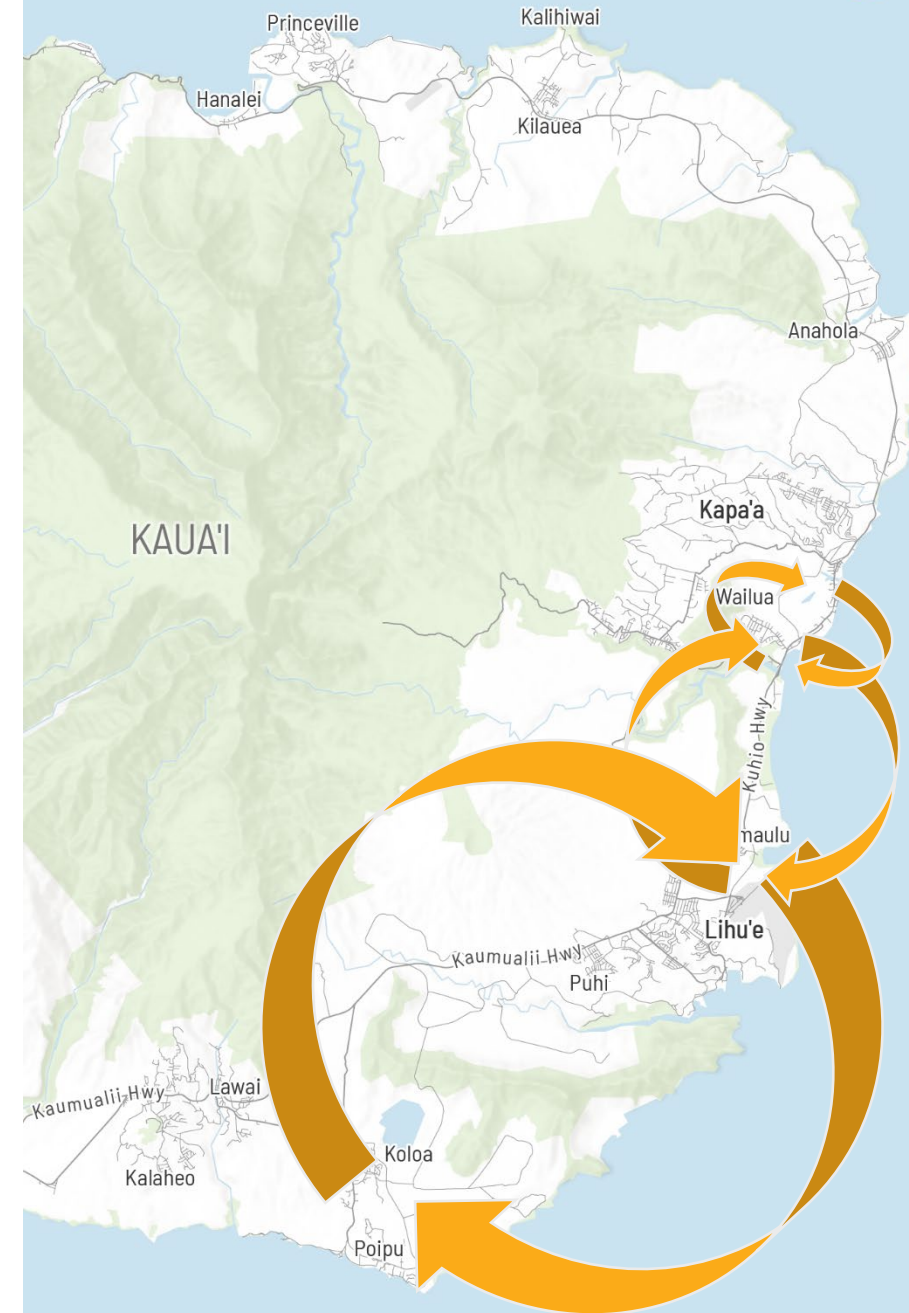


Round Trip / Frequency = Total # of Vehicles (rounded up)



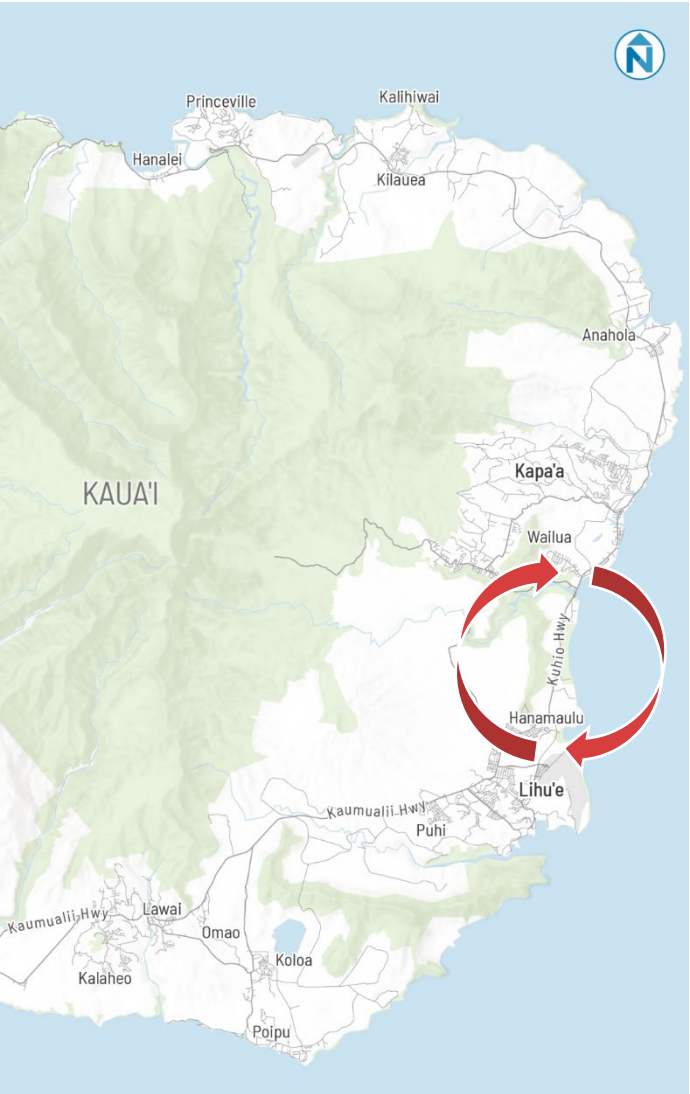
8 shuttles are required during peak hours to achieve 15-minute frequency

That'll result in approximately 42,000 annual revenue hours

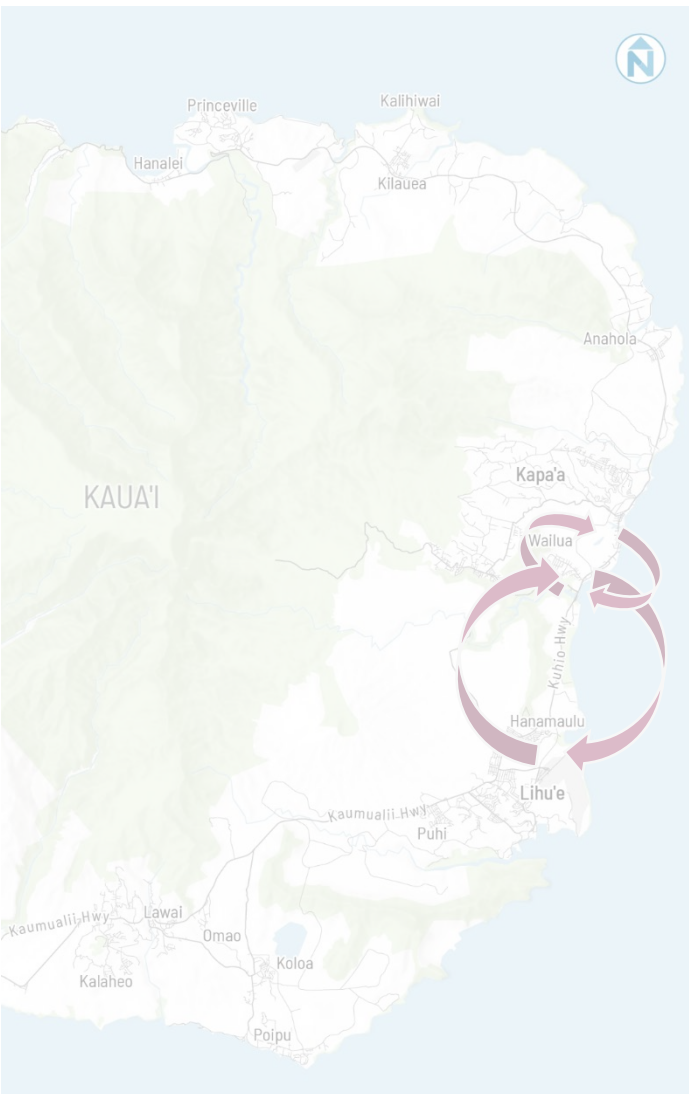


Shuttle Alternative Development and Refinement

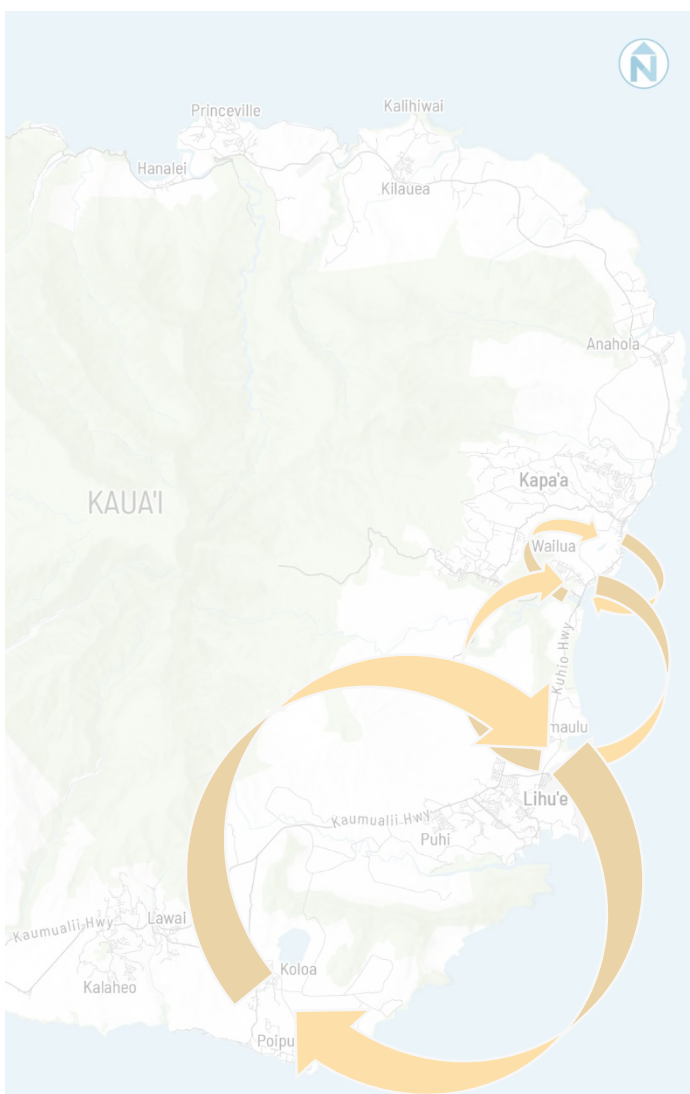
SHUTTLE OPTION 1: EXPRESS SHUTTLE



SHUTTLE OPTION 2: NORTHERN EXTENSION



SHUTTLE OPTION 3: NORTHERN AND SOUTHERN EXTENSION





Express Shuttle

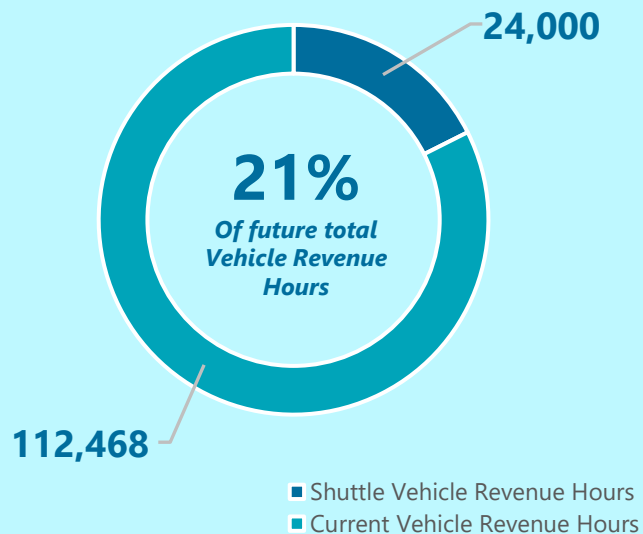
LIH Airport ↔ Coconut Marketplace Shuttle

Number of Vehicles



Operations

In the Context of Existing Kaua'i Bus Service



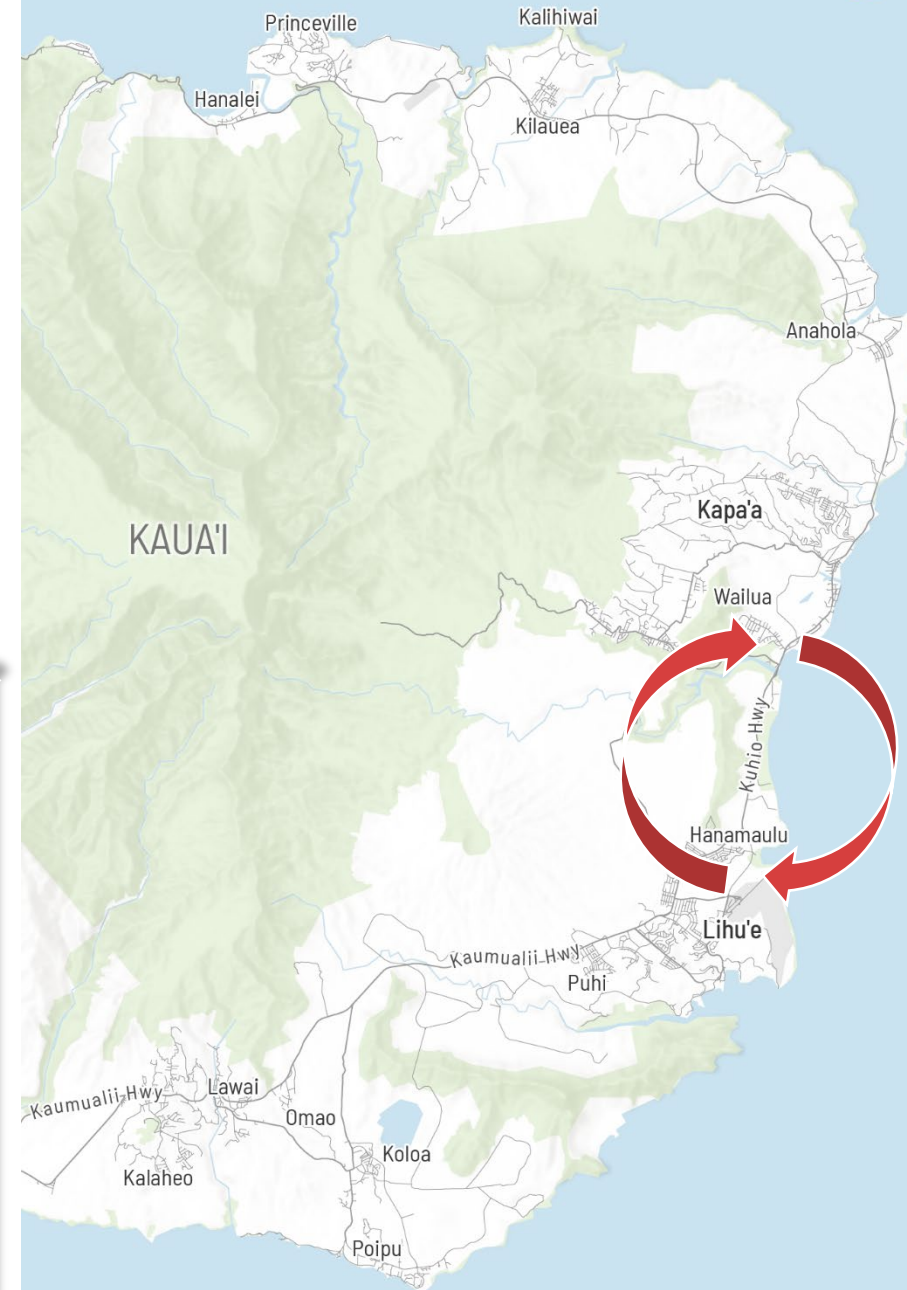
Funding Notes

- Currently, Kaua'i Bus gets **about 5% of its revenue** from fares
- Consider alternative funding options including **federal, state, or non-profit** opportunities



Cost and Funding Considerations

Shuttle Bus Cost.....	\$3.1M/yr
Operations Cost.....	\$3.6 M/yr
Potential Ridership*	140 /day
*assumes a target shuttle mode share of 20-25%	
Potential Revenue**	\$772 K/yr
**assumes a \$15 one-way fare	



Service Considerations



4

Considerations

Consider Shorter Test Period Than 1 Full Year

- **Pros:** Concentrating marketing and performance monitoring resources to peak period, Focusing on proof of concept prior to further commitments, Allow for time to develop a more sustainable funding source
- **Cons:** Would certainly have to be a fully contracted/purchased arrangement

Performance Measures to Consider:

- Number of riders per vehicle hour of operation
- Reductions to average daily traffic volumes and peak hour traffic volumes on the Highway between LIH and Hanalei
- Customer satisfaction with hotels, rental hosts, visiting, and airport experience
- Average number of days of car rentals among visitors
- Visitor transportation mode choices, specifically for car share, taxi/ridehailing, and transit

Additional Considerations

- Airport – CMMH shuttle ridership assumptions
 - Portion of islandwide accommodations in CM area (15%) X total daily visitors to Kaua'i (4,000) = 600 daily visitors to CMMH area
 - Potential shuttle mode share for visitors' trips from airport to CMMH, targeting 20-25% (ambitious) X 600 daily visitors = ~120-150 potential daily one-way trips from airport to CMMH
- There are multiple user group types within the "visitors" group
 - People most likely to ride the shuttle are smaller groups and people staying over a longer duration of time
 - Shuttle service may also appeal to larger families and short-term visitors
 - Other potential user groups such as residents and local airport employees are not included in the above calculation, but would benefit and have access to the shuttle service
- Service frequency will impact operating needs – difference between every 15 minutes and every 20 minutes for Alternative Option 1:
 - Operating vehicles: five vs. four
 - Annual revenue hours: 24,000 vs. 20,000 hours
 - Perceived schedule convenience: 15 mins closer to urban best practice vs. moderately longer wait